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# WORK PLAN ADDENDUM - SEEPAGE INVESTIGATION PLAN FOR PADDY'S RUN SOUTH - DCR 52

08/03/90

DOE-1583-90
DOE-FMPC/USEPA & OEPA
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LETTER

**Department of Energy**
**FMPC Site Office**
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AUG 03 1990
DOE-1583-90

Catherine A. McCord, Remedial Project Manager
U. S. Environmental Protection Agency
Region V - 5HR-12
230 South Dearborn Street
Chicago, IL 60604

Graham E. Mitchell, FMPC Coordinator
Ohio Environmental Protection Agency
40 South Main Street
Dayton, OH 45402

Dear Ms. McCord and Mr. Mitchell:

**WORK PLAN ADDENDUM - SEEPAGE INVESTIGATION PLAN FOR PADDYS RUN SOUTH - DCR 52**

This is to transmit for approval the enclosed addendum to the Remedial Investigation/Feasibility Study (RI/FS) Work Plan for the Seepage Investigation of Paddys Run South.

This plan and additional backup information was telefaxed to you on August 2, 1990.

Since this addendum represents field work to support the RI/FS for Operable Unit 5, your expedient attention would be greatly appreciated.

If you have any questions, please contact Andy Avel, at (513) 738-6161.

Sincerely,

Bobby Davis
Environmental Manager

DP-84:Avel

Enclosure: As stated

cc w/o encl.:

L. P. Duffy, EM-1, FORS
P. Q. Andrews, USEPA-5
D. A. Kee, USEPA-5
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E. Schuessler, PRC

**PADDYS RUN SOUTH**

**SEEPAGE INVESTIGATION**

TECHNICAL APPROACH

Up to twelve 2000-series wells will be installed along Paddys Run to provide sampling points for water-level measurements and water quality data. Wells at the 3000-series level are recommended on a contingency basis at each of the 12 locations in order to determine the vertical extent of contamination that may be found in the 2000-series wells. Figure 3 shows the approximate location of the proposed wells, the existing wells in the area, and the approximate location of the wells installed as part of the Paddys Run Road Site RI/FS.

Stream Discharge/Seepage Measurements

In order to determine the seepage from the stream to the aquifer, a stream seepage survey will be conducted under at least two different flow conditions. This survey consists of precise measurements of the volume of water in the stream at several locations along its length. A water balance determination is then made to determine if the stream is receiving or losing water between the measurement stations. For areas where the stream is losing water to the aquifer, seepage tests will be conducted to determine the rate of seepage. Additionally, specific conductance surveys will be completed in Paddys Run and in monitor wells adjacent to Paddys Run to further define the areas where the stream is gaining water from the aquifer. These surveys will also be completed during at least two different flow conditions.

Stilling wells will be installed in Paddys Run at Locations 125 and 126. The data loggers and pressure transducers formerly used at Locations 9 and 14 will be used continuously to measure water levels in the stream and the 2000-series well at these locations.

This information will determine the length of time any set-of-flow conditions exist in the stream.

Water Quality Sampling

Water quality samples will be collected from both the stream and the wells along the stream. Table 2 lists the wells along Paddys Run that will be included in the sampling program. Because the investigation is to determine the influence of relatively short-lived events, such as the impact of stormy weather for a month, the wells and stream will be sampled on a monthly basis for one year. Full radiological analysis as defined in the RI/FS Work Plan dated March 1, 1988 will be conducted on all monthly samples. The general groundwater quality analysis as defined in the RI/FS Work Plan dated March 1, 1988 will be added quarterly. The five stream sample points will be at Willey Road, near well Location 125, at New Haven Road, at the former bridge on old Highway 128, and at the bridge on Highway 128.

[redacted]

Table 2

Monitor Wells For Paddys Run South

| 2000-Series | 3000-Series | 4000-Series |
|---|---|---|
| 2017 | 3017 | |
| 2106 | 3106 | |
| 2550 | 3550* | |
| 2551 | 3551* | |
| 2095 | 3095 | |
| 2125 | 3125 | 4125 |
| 2396 | 3396 | |
| 2552 | 3552* | |
| 2553 | 3553* | |
| 2128 | 3128 | |
| 2126 | 3126 | |
| 2555 | 2555* | |
| 2129 | | |
| 2393 | | |
| 2555 | 3554* | |
| 2556 | 3556* | |
| 2557 | 3557* | |
| 2127 | 3127 | |
| 2558 | 3558* | |
| 2559 | 3559* | |
| 2560 | 3560* | |
| 2561 | 3561* | |
| 2094 | 3094 | |

* = Contingency wells